

Automotive Power MOSFET Module

NXV08H250DT1

Features

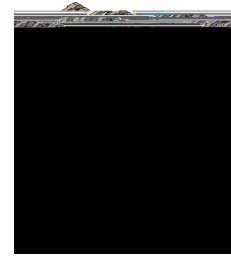
- 2 Phase MOSFET Module
At Customer Side this Module Can Be Used as 1/2 Bridge MOSFET Module by Combining 2 Phase Out Power Terminals
- Electrically Isolated DBC Substrate for Low Rthjc
- Compact Design for Low Total Module Resistance
- Module Serialization for Full Traceability
- Module Level AQG324 Qualified. Components Inside are AEC Q101 (MOSFET) & AEC Q200 (Passives) Qualified
- UL 94 V-0 Compliant
- This Device is Pb-Free and is RoHS Compliant
- ESD Tested for HBM and CDM per AEC Q101, JS-001, JS-002

Applications

- 48 V Inverter, 48 V Traction

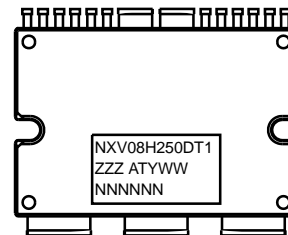
Benefits

- Enable Design of Small, Efficient and Reliable System for Reduced Vehicle Fuel Consumption and CO₂ Emission
- Simplified Vehicle Assembly
- Low Thermal Resistance to Junction to Heat Sink by Direct Mounting via Thermal Interface Material between Module Case and Heat Sink
- Low Inductance



APM17 MDC
CASE MODHH

MARKING DIAGRAM



NXV08H250DT1	= Specific Device Code
ZZZ	= Lot ID
AT	= Assembly & Test Location
Y	= Year
WW	= Work Week
NNN	= Serial Number

ORDERING INFORMATION

See detailed ordering and shipping information on page 2 of this data sheet.

NXV08H250DT1

ORDERING INFORMATION

Part Number	Package	Pb Free and RoHS Compliant	Operating Ambient Temperature Range	Packing Method
NXV08H250DT1	APM17-MDC	yes	-40~125°C	Tube

NXV08H250DT1

Block Diagram

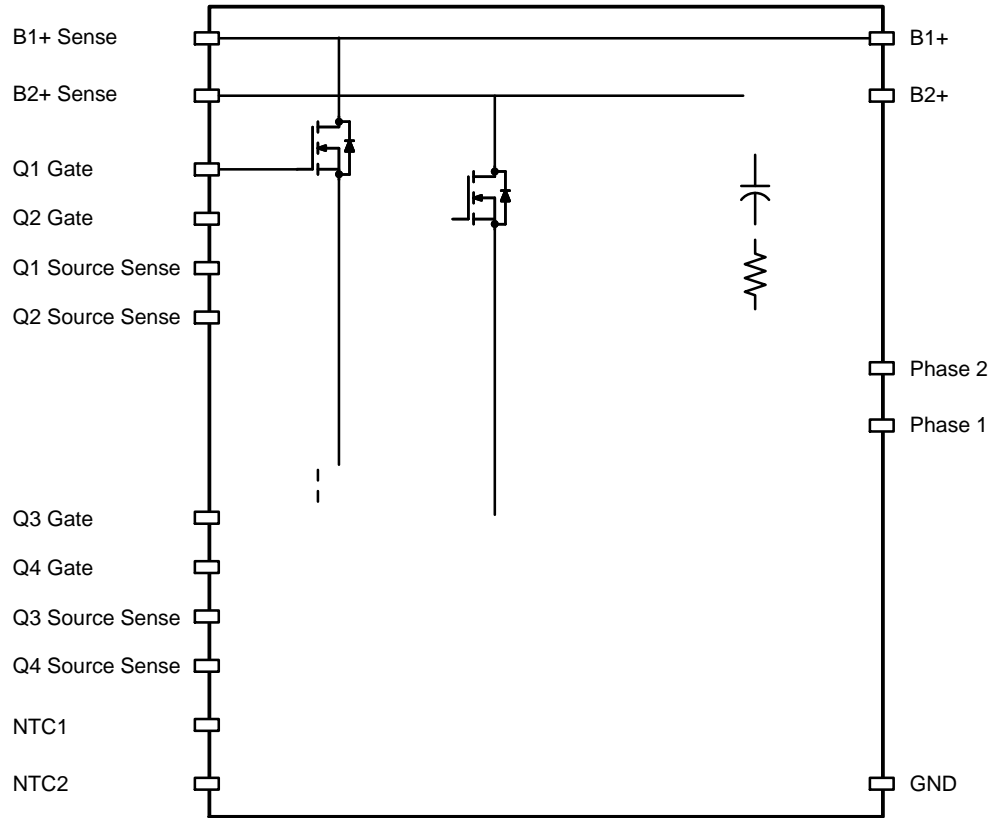


Figure 2. Schematic

NXV08H250DT1

ELECTRICAL CHARACTERISTICS (T_J = 25°C, unless otherwise noted)

Characteristic	Condition	Min	Typ	Max	Unit
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NXV08H250DT1

ISOLATION VOLTAGE (Isolation voltage between the Base plate and to control pins or power terminals.)

Test	Test Condition	Test Time	Min	Max	Unit
Leakage @ Isolation Voltage (Hi-Pot)	VAC = 3 kV	Time = 1 s	-	250	μ A

DYNAMIC AND SWITCHING CHARACTERISTICS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

TYPICAL CHARACTERISTICS

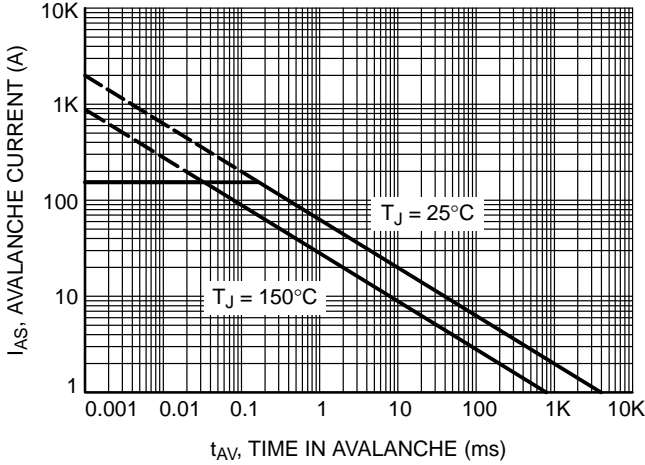


Figure 3. Unclamped Inductive Switching Capability

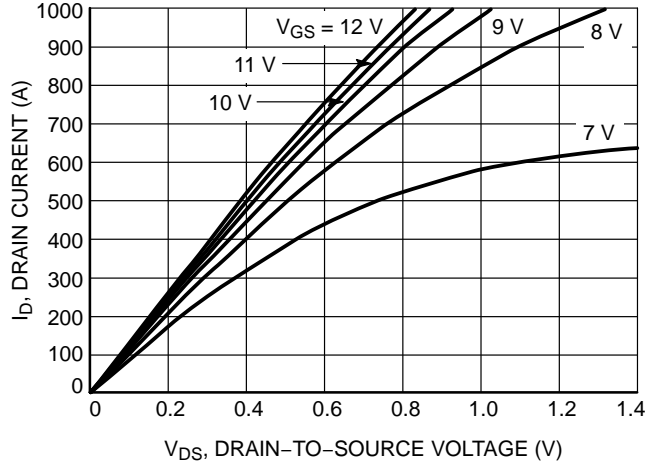


Figure 4. Saturation Characteristics

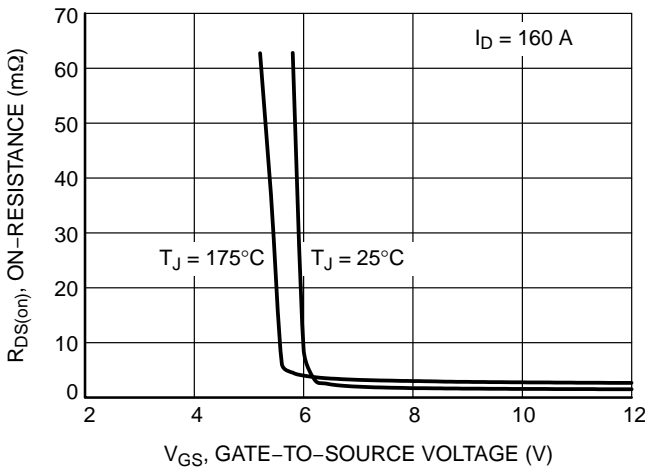


Figure 5. $R_{DS(on)}$ vs. Gate Voltage

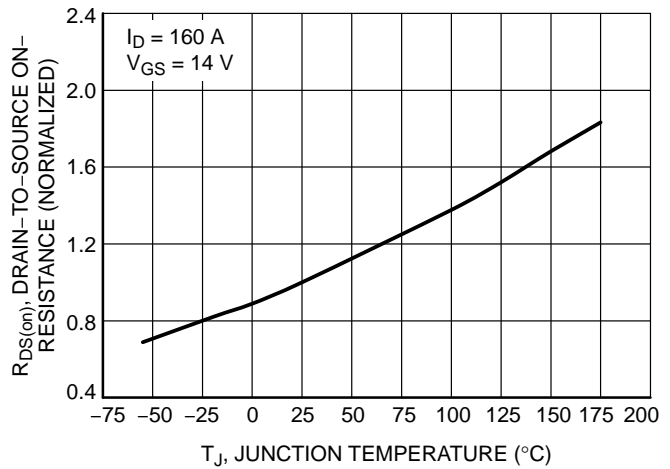


Figure 6. $R_{DS(on)}$ vs. Temperature

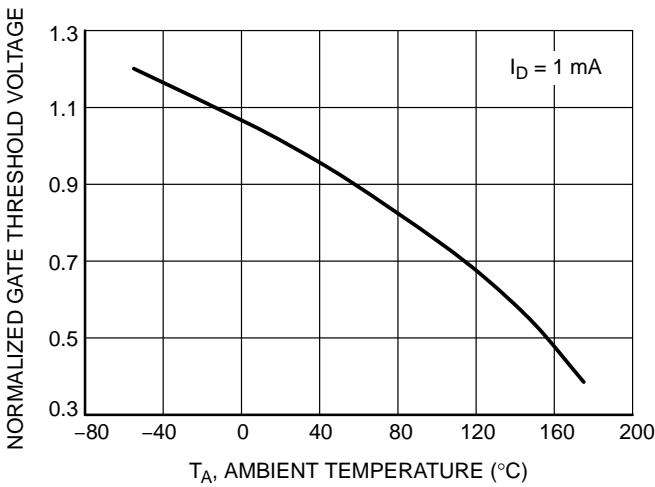


Figure 7. Normalized Gate Threshold Voltage vs. Temperature

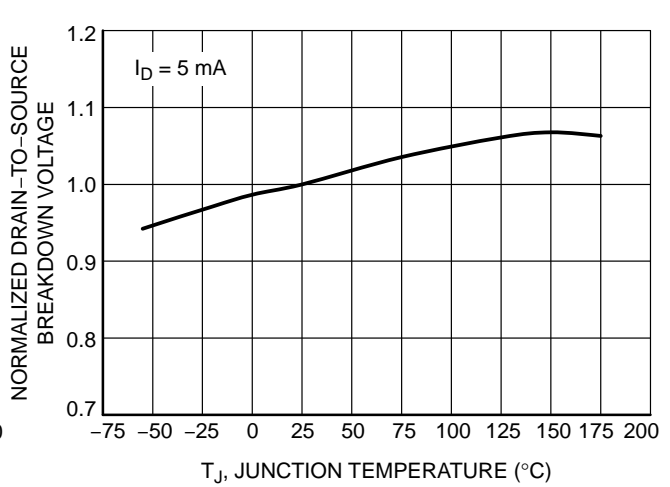


Figure 8. Normalized Drain to Source Breakdown Voltage vs. Junction Temperature

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TYPICAL CHARACTERISTICS

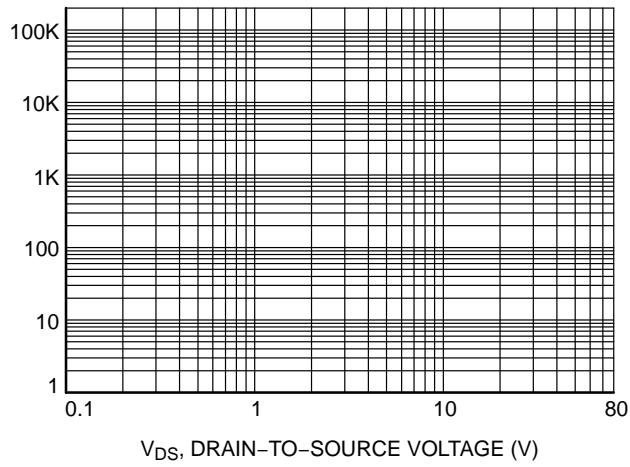


Figure 9. Capacitance vs. Drain to Source Voltage

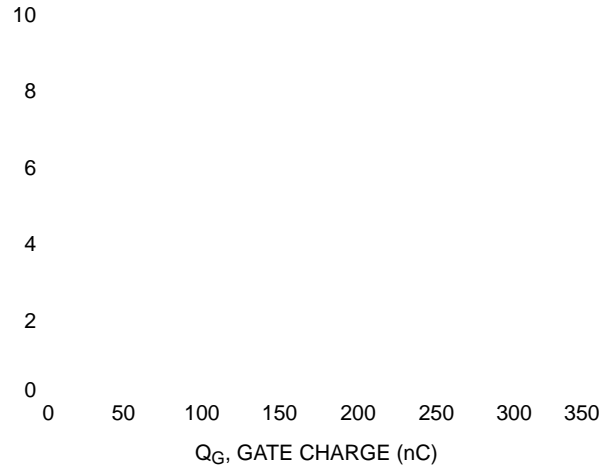


Figure 10. Gate Charge vs. Drain to Source Voltage

V_{DS} , DRAIN-SOURCE VOLTAGE (V)

Figure 11. Safe Operating Area

V_{GS} , GATE-TO-

Figure 12. Transfer Characteristics

**APM17-MDC
CASE MODHH
ISSUE C**

DATE 08 DEC 2021

09.

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